

Two new species of *Laureola* Barnard, 1960 from India and Vietnam (Crustacea, Oniscidea, Armadillidae)

par

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With 5 figures

ABSTRACT

Two species of *Laureola* Barnard, 1960 (Armadillidae), *L. indica* from India, and *L. vietnamensis* from Vietnam, are described as new. These records fill the distributional gap of the genus, previously known from Africa and Australia.

The genus *Laureola* was established by BARNARD (1960: 53) to accommodate three species previously ascribed to the genus *Akermania* Collinge, 1919 and three new species, all from southern Africa. The definition of the genus is very short and incomplete, and also contains a mistake ("No flange or tooth ventrally on epimera of 1st and 2nd peraeon segments", actually present). Some years later VANDEL (1973a), discussing species from Australia, gave a new definition of *Laureola* and instituted the new genus *Praelaureola*. Curiously all Barnard's species fit Vandel's definition of *Praelaureola* while none can be placed in *Laureola* sensu Vandel, 1973 so that SCHMALFUSS & FERRARA (1983) synonymized *Praelaureola* Vandel, 1973 with *Laureola* Barnard, 1960 and instituted the new genus *Pseudolaureola* for *Laureola* sensu Vandel. *Pseudolaureola* includes three species: *P. wilsmorei* (Nicholls and Barnes, 1926) from western Australia, *P. atlantica* (Vandel, 1977) from St. Helena, and *P. hystrix* (Barnard, 1958) from Madagascar. Since no type species was selected for *Pseudolaureola*, *Laureola atlantica* Vandel is here designated as such. SCHMALFUSS & FERRARA (1983) also suggested that *Laureola* might correspond to *Echinodillo* Jackson, 1933 which at present includes two species: *E. montanus* Jackson, 1933 from Marquesas Islands, and *E. cavaticus* Green, 1963 from Tasmania. The problem of this synonymy can only be clarified with a general comparative study, which has not yet been possible to undertake.

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Nine species are currently ascribed to the genus *Laureola*: *L. paucispinosa* (Barnard, 1949), *L. longispina* (Barnard, 1956), *L. miacantha* (Barnard, 1960), *L. bivomer* Barnard, 1960, *L. hiatus* Barnard, 1960, *L. rubicunda* Barnard, 1960, *L. silvatica* (Vandel, 1973), *L. canberrensis* (Vandel, 1973), and *L. dubia* Schmalfluss and Ferrara, 1983. The first six species populate southern Africa, *L. dubia* Principe and Sao Tomé islands in the Gulf of Guinea, and *L. silvatica* and *L. canberrensis* New South Wales, Australia.

The discovery of two new species of *Laureola* from southern India and Vietnam is of particular interest since these two areas fill a good part of the distributional gaps between the species of *Laureola*.

The material is deposited in the collections of the Hungarian Natural History Museum, Budapest (HNHM), the Muséum d'Histoire Naturelle, Genève (MHNG), and the Museo Zoologico "La Specola" (Sezione del Museo di Storia Naturale) dell'Università, Firenze (MZUF).

Genus *Laureola* BARNARD, 1960

Synonyms: *Praelaureola* VANDEL, 1973a: 150.

Paralaureola VANDEL, 1973b: 142 (nomen nudum).

Type-species: *Akermania paucispinosa* Barnard 1949, by original designation.

Laureola indica sp. nov. (Figs 1-3)

Specimens examined. — India, Travancore: 1 ♀ holotype, Palnis supérieurs, petite Shola au-dessus de Pumarai, 2000 m, sous bois, 29.III.1927, leg. J. Carl (MHNG); 2 ♀ ♀ paratypes, Palnis supérieurs, Kukkäl-Shola, ca. 2000 m, sous bois pourri, 1.IV.1927, leg. J. Carl (MHNG); 1 ♀ paratype, same data (MZUF); 5 ♀ ♀ paratypes, Vallée de Vattavadaï (entre Palnis et Anaimalais), grande forêt primaire dans la partie supérieure de la vallée, env. 1800-1850 m, 10.IV.1927, leg. J. Carl (MHNG); 1 ♂, 1 ♀, paratypes, same data (MZUF).

Description. — Maximum size, 6.5 x 4.5 mm. Colour yellow, brown or reddish brown. Dorsum with short spiniform tubercles arranged as follows: 5 on cephalon; 1+5 on pereonite 1; 5 on each of pereonites 2-7; 1 in the middle of each of pleonites 3-5. One line of noduli laterales per side, arranged on lateral tubercles of each pereonite. Eyes with 16-17 ommatidia. Cephalon with frontal lamina distinctly protruding above vertex, with upper margin raised in the middle, forming a triangular process frontally excavated. Pereonite 1 with posterior margin concave at the sides, postero-lateral corner rounded; a small rounded transversal tooth on ventral surface of epimera. Epimera of pereonites 2-4 triangular; 5-7 and pleonites 3-5 with short points at posterior corners. Pereonite 2 ventrally with a large quadrangular lobe more or less parallel to the anterior margin, clearly separated in the distal part from outward directed epimeron. Telson with triangular distal part, sinuous sides. Antennule with many superimposed aesthetascs near apex. Antenna with second article of flagellum four times as long as first. Mandible with molar penicil composed of several plumose setae of increasing length, each arising from a common stem. Outer branch of maxillule with 10 teeth apically simple; inner branch with two unequal penicils. Maxilliped with no particular modifications. Uropods with protopod triangular, exopod inserted near medial margin, not surpassing tip of protopod.

Male. All pereopods without apparent sexual specializations. Pleopod 1 exopod small, much wider than long, with largely rounded distal part; endopod with apical part bent outwards, without particular modifications. Pleopod 2 exopod slightly shorter than endopod; endopod with styliiform distal part.

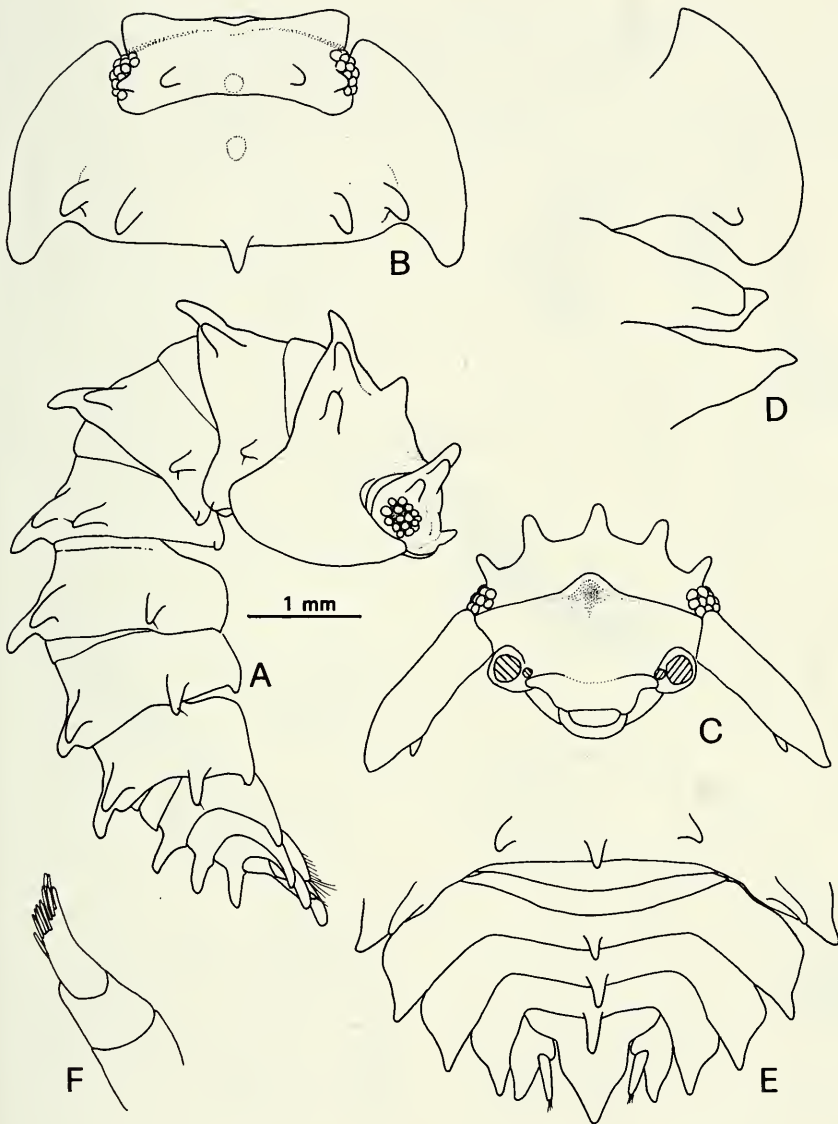


FIG. 1.

Laureola indica sp. nov., ♀ paratype: A) lateral view; B) cephalon and pereonite 1 in dorsal view; C) the same in frontal view; D) left epimera of pereonites 1-3 in ventral view; E) pereonite 7, pleon, telson and uropods; F) antennule.

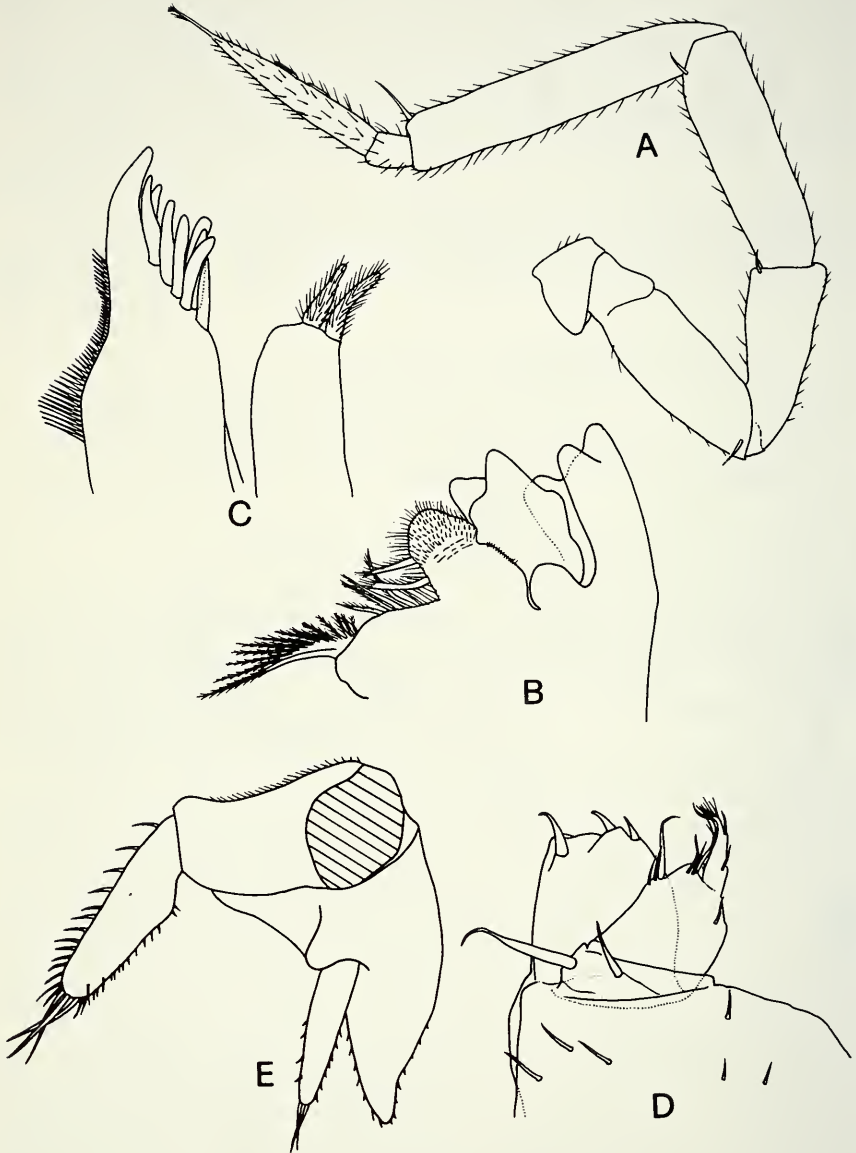


FIG. 2.

Laureola indica sp. nov., ♀ paratype: A) antenna; B) mandible; C) maxillule; D) maxilliped; E) uropod.

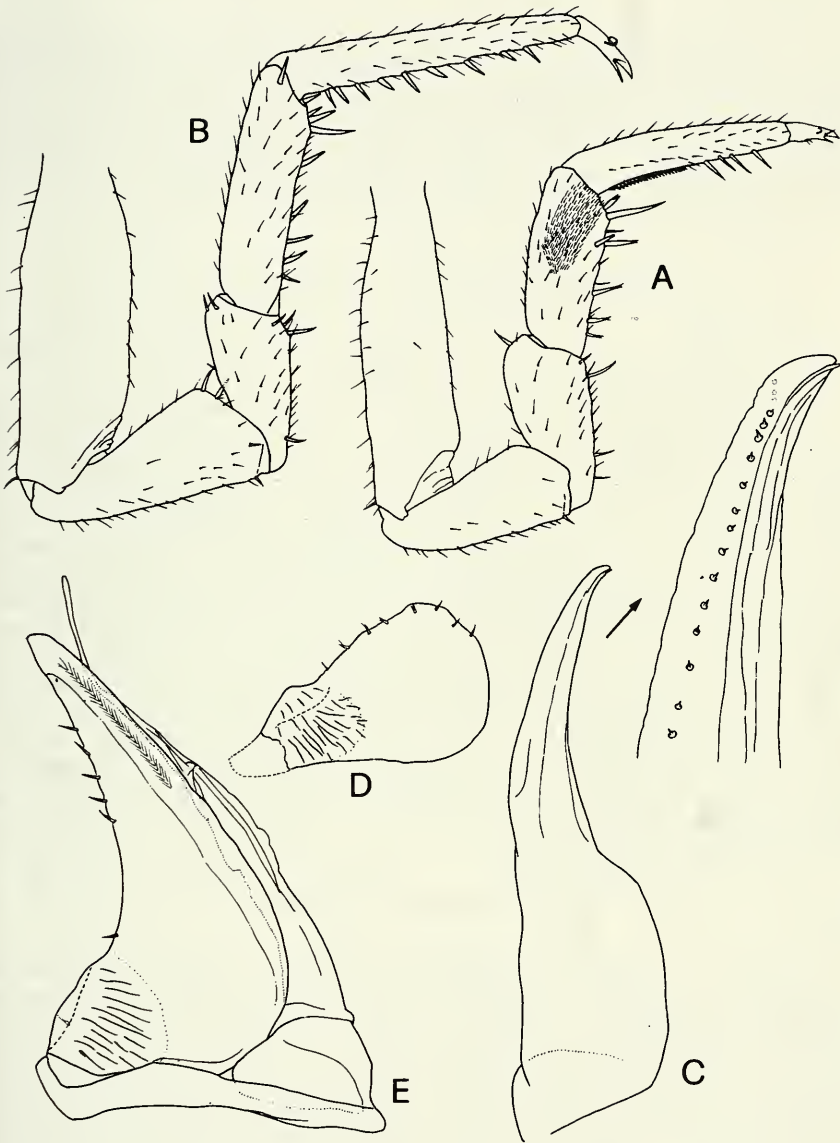


FIG. 3.

Laureola indica sp. nov., ♂ paratype: A) pereopod 1; B) pereopod 7; C) pleopod 1 endopod; D) pleopod 1 exopod; E) pleopod 2.

E t y m o l o g y . – The name of the species refers to India, where the specimens were collected.

R e m a r k s . – The easiest characters to distinguish species of *Laureola* are number, shape and disposition of dorsal spiniform tubercles. *L. indica* is readily distinguished from southern African species by the fewer tubercles (total 44 vs 81 or more); from *L. dubia* and *L. canberrensis* by the different number of tubercles and also by the shape of the telson with triangular instead of rectangular distal part (from *L. dubia* also by the shape of uropodal protopod, distally acute vs rounded); from *L. sylvatica* by the number (46 vs 73) and disposition (presence of median spine) of tubercles.

***Laureola vietnamensis* sp. nov. (Figs 4, 5)**

S p e c i m e n s e x a m i n e d . – Vietnam: 1 ♀ holotype, Cuc Phuong, Prov. Ninh binh, 14.V.1966, beaten from bushes in forest, leg. Topàl (HNHM).

D e s c r i p t i o n . – Dimensions: 8 x 5 mm. Colour yellowish (faded by conservation?). Dorsum with long spiniform tubercles arranged as follows: 2+5 on cephalon; 7 on pereonite 1; 9 on pereonites 2-6; 7 on pereonite 7; a short median one on pleonites 3 and 4; a long one on basal part of telson. Pereonites 2-7 with a pair of sublateral triangular projections, directed forwards, which overlap the preceding pereonite. One nodulus lateralis per side on each lateral tubercle of pereonites, in subapical position. Globose eyes with 16 ommatidia. Cephalon with frontal lamina distinctly protruding above vertex and with a long triangular process in the middle. Pereonite 1 with posterior margin straight and largely rounded posterolateral corner; a small rounded tooth on ventral surface of epimera near posterior margin; epimera directed outwards. Pereonites 2-7 and pleonites 3-5 with lateral margins of epimera elongated, tapering, directed horizontally outwards. Epimera of pereonite 2 ventrally with a large quadrangular lamellar lobe. Telson with narrow triangular distal part, apex subacute. Antenna with long fifth article of peduncle, slightly exceeding middle of pereonite 1 when pushed back; flagellum with second article over three times as long as first. Buccal pieces as in *L. indica*. Uropods with protopod triangular, long exopod inserted on medial margin, distinctly surpassing tip of protopod but not reaching tip of telson.

E t y m o l o g y . – The species is named after Vietnam where the specimen was collected.

R e m a r k s . – *L. vietnamensis* differs from all the other species by the number and disposition of tergal tubercles. It is similar to *L. longispina*, *L. miacantha*, *L. bivomer*, and *L. hiatus*, all with a triangular telson and long dorsal spiniform tubercles. Among other characters, *L. vietnamensis* is readily distinguished from these and *L. indica* by the lack of tubercles on pleonite 5 and the long triangular process in the middle of the frontal lamina. It differs from *L. sylvatica*, *L. dubia* and *L. canberrensis* by having a median tubercle on the pereonites, pleonites 3-4 and telson, by the frontal process and the length of tubercles. From *L. dubia* and *L. canberrensis*, it also differs in the shape of telson (triangular vs rectangular) and uropods.

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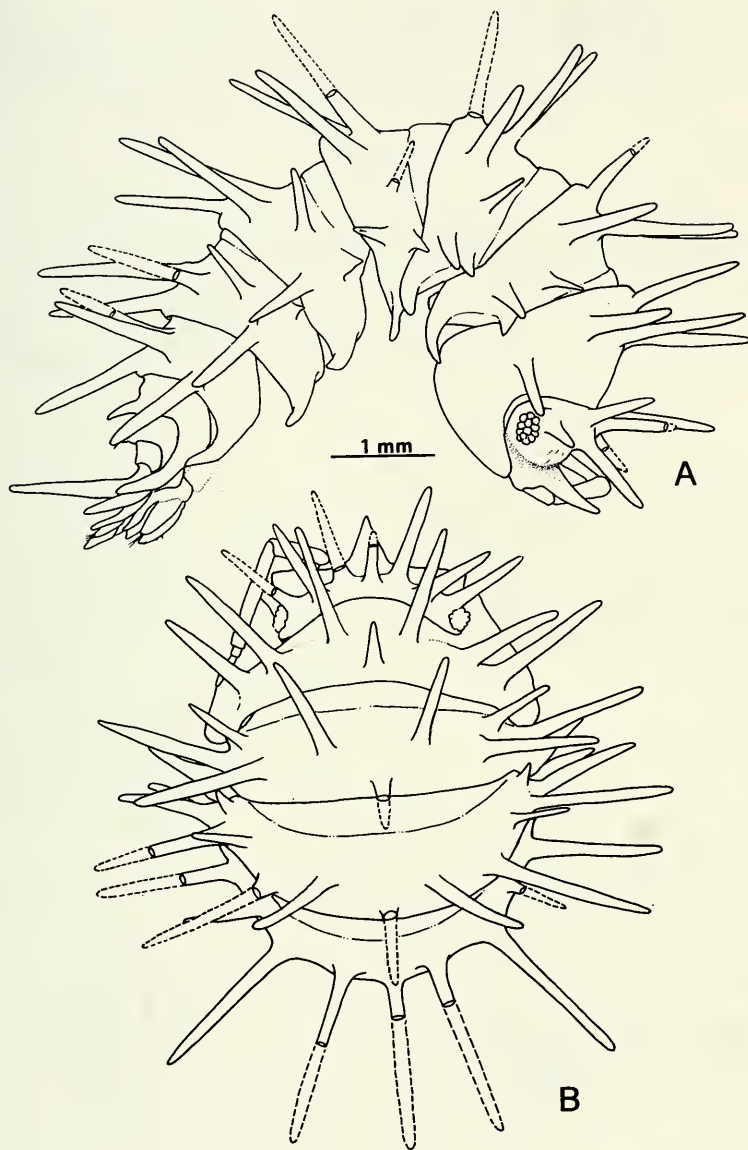


FIG. 4.

Laurolela vietnamensis sp. nov., ♀ holotype: A) lateral view; B) cephalon and pereonites 1-4 in dorsal view.

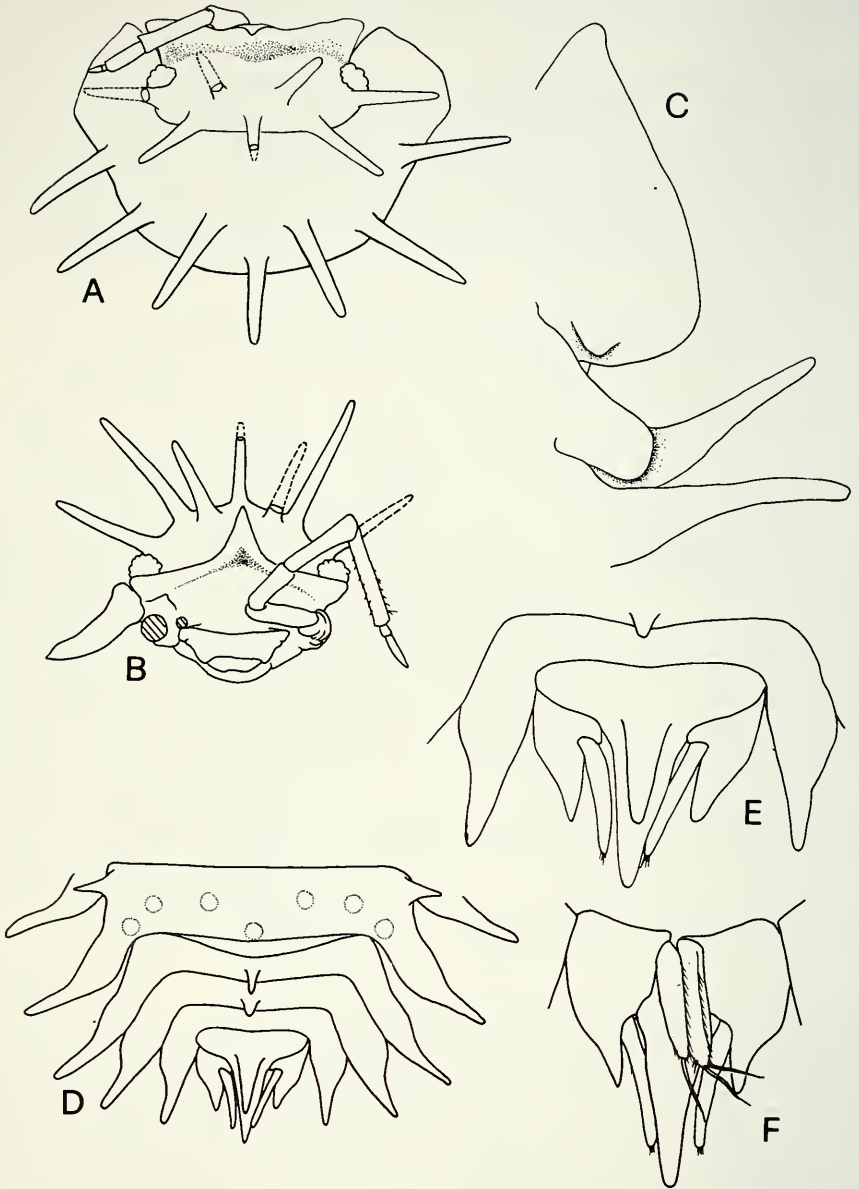


FIG. 5.

Laureola vietnamensis sp. nov., ♀ holotype: A) cephalon and pereonite 1 in dorsal view; B) cephalon in frontal view; C) left epimera of pereonites 1-3 in ventral view; D) pereonite 7, pleon, telson and uropods (position of spiniform tubercles on pereonite 7 is represented by circles); E) pereonite 5, telson and uropods in dorsal view; F) telson and uropods in ventral view.

RÉSUMÉ

Deux nouvelles espèces de *Laureola* Barnard, 1960 (Armadillidae), *L. indica* d'Inde et *L. vietnamensis* du Viêt-Nam sont décrites. Ces données permettent d'étendre la distribution du genre, connu jusqu'à présent seulement d'Afrique et d'Australie.

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